CLAIMS

What is claimed is:

1. A data structure generation system comprising:

a knowledge base configured to be coupled to a data structure assembly facility, the knowledge base configured to store data structure components as objects in an object-relational hierarchy, each object configurable to have a precedence, to include one or more rules, and to include content.

2. A system as claimed in claim 1, wherein the precedence provides hierarchical control of content to match business preferences.

3. A system as claimed in claim 1, further comprising a first set of objects, a second set of objects, and a third set of objects, the first set of objects having a first, read-only precedence level, the second set of objects having a second precedence level that is higher than the first precedence level, and the third set of objects having a third precedence level that is higher than the second precedence level.

4. A system as claimed in claim 3, further comprising a data structure assembly facility.

5. A system as claimed in claim 4, wherein the assembly facility is operable to retrieve one or more data structure components from the knowledge base based on a transaction identifier; process the one or more data structure components in a processor to generate a tree having a root node; process the tree beginning at the root node; and to override objects of low precedence with objects of high precedence.

6. A system as claimed in claim 5, wherein the assembly facility is operable to, when a object having a rule is encountered, evaluate the rule and replace it with a value.

7. A system as claimed in claim 4, further comprising an authoring tool and a content management system.

8. A system as claimed in claim 7, wherein the content management system is configured to permit a user to create a version of an object in the first set of objects, and save the version of the object at a precedence that is different than the first precedence level.

9. A system as claimed in claim 7, wherein the content management system is configured to permit a user to create a version of an object in the first set of objects where the version of the object and the object at a different precedence level have the same name.

10. A system as claimed in claim 1, wherein each object is configurable to be locked in order to prevent overriding by an object having a higher precedence level.

11. A knowledge base configured to store data structure components as objects in an object-relational hierarchy, each object configurable to have a precedence, to include one or more rules, and to include content.

12. A knowledge base as claimed in claim 11, further comprising a first set of objects, a second set of objects, and a third set of objects, the first set of objects having a first, read-only precedence level, the second set of objects having a second precedence level that is lower than the first precedence level, and the third set of objects having a third precedence level that is lower than the second precedence level.

13. A knowledge base as claimed in claim 12, wherein each object is configurable to be locked in order to prevent overriding by an object having a higher precedence level.

14. A method of assembling a data structure from a group of components, the method comprising:

retrieving one or more cross-referenced data structure components from a database, the one or more data structure components configured to have a precedence level;

processing the one or more cross-referenced data structure components in a processor to generate a tree having a root node;

processing the tree beginning at the root node; and

overriding objects of low precedence with objects of high precedence.

15. A method as claimed in claim 14, further comprising creating a transaction data set.

16. A method as claimed in claim 15, wherein retrieving one or more cross-referenced data structure components from a database including retrieving the same based on the transaction data set.

17. A method as claimed in claim 15, wherein the one or more data structure components are configured to include one or more rules.

18. A method as claimed in claim 15, further comprising, when a rule is encountered, evaluating the rule and replacing it with a value.

19. A method as claimed in claim 14, further comprising configuring each data structure component to have a precedence level.

20. A method as claimed in claim 19, further comprising configuring each data structure component to be lockable in order to prevent overriding by an object having a higher precedence level.

21. A method as claimed in claim 19, further comprising configuring the database so that it may include a first set of data structure components, a second set of data structure components, and a third set of data structure components, the first set of data structure components having a first, read-only precedence level, the second set of data structure components having a second precedence level that is higher than the first precedence level, and the third set of data structure components having a third precedence level that is higher than the second precedence level

22. A computer readable medium containing instructions for generating a data structure by

retrieving one or more cross-referenced data structure components from a database, the one or more data structure components configured to have a precedence level;

processing the one or more cross-referenced data structure components in a processor to generate a tree having a root node;

processing the tree beginning at the root node;

overriding objects of low precedence with objects of high precedence; and

transforming the resulting tree into a data structure representing a document.

23. A computer readable medium as claimed in claim 22, further comprising instructions for structuring the one or more data structures so that they may include one or more rules.

24. A computer readable medium as claimed in claim 23, further comprising instructions for processing the one or more data structures components so that when a rule is encountered, the rule is evaluated and replaced with a value.